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Commentary

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Taxing Business:

A Provincial Affair?

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and
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In this issue...

A new system for provincial taxes on business, a business value tax (BVT), could replace both provincial corporate income and capital taxes, and produce the same revenue in an economically less distorting way.

The Study in Brief

This *Commentary* proposes a new business value tax (BVT) to replace provincial corporate income and capital taxes, which would produce the same net revenues as existing taxes but do so in an economically less harmful way.

Taxes on business income and capital are important sources of provincial revenue. But they are poorly designed from an economic perspective, and have bad effects on competitiveness. Taxes on business investment in Canada — even after reductions scheduled to take effect over the next few years — will be higher than in many competing countries, especially in the increasingly important services sector; existing provincial business taxes account for more than 40 percent of this burden. A BVT would, however, be more congenial to investment and job growth.

A BVT would provide a feasible and ultimately preferable way for provinces to raise the same total revenue from corporate income and capital taxes, but levied on a tax base that is neutral across all business activities and all sources of finance. Applying a BVT to a broad base would allow provinces to have lower tax rates on incremental capital investment, raising the net return to business ventures in Canada. Such a change would be beneficial for business investment and improve Canada's competitiveness.

A BVT tax base would be very different from corporate income or capital tax bases. The starting point of a BVT base would be corporate taxable income as currently calculated, but interest expenses and salaries and wages would be added back to arrive at the BVT taxable base. Including interest expenses in the tax base would deliver equal treatment to equity and debt finance; as it stands, the tax regime favors debt, because dividend payments are included in the income tax base but interest payments are not. Including labor costs in the tax base would mean equal treatment for labor and financial capital as business inputs; again, with wages deductible and dividends not, as at present, the tax system encourages firms to employ an inefficient amount of labor relative to capital.

In short, a BVT system would offer a better environment for investment and job growth, and fairer treatment for businesses with different financing structures. Moreover, such a change would be economically and politically feasible.

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If Canadians are concerned about the taxation of business, as they should be, what goes on at the provincial level deserves attention. Provincial corporate income taxes (CITs) accounted for less than 10 percent of provincial tax revenue, but constituted over 35 percent of total taxes on corporate income in 1999 (Treff and Perry 2001). In 1995, provincial taxes such as capital taxes, the portion of payroll taxes borne by business (Dalhby 1993), and sales and excise taxes that fall on business inputs (Kuo et al. 1988) accounted for 43 percent of total business taxes. Local taxes — mainly the nonresidential property tax — accounted for another 23 percent (Technical Committee on Business Taxation 1998). Two-thirds of the taxes impacting directly on Canadian business are thus levied by provincial and local governments.

Mintz (1999) argues that Canada's statutory corporate income tax rate is high relative to other countries of the Organisation for Economic Co-operation and Development (OECD), and suggests that significant corporate tax rate reductions are needed at the federal level to make Canada's corporate tax regime more competitive internationally. In its most recent budget, the federal government followed through and announced its intention to reduce the basic federal corporate income tax rate by 7 percentage points over the next five years, equalizing it with the manufacturing rate of 21 percent by 2005. Since provincial corporate taxes are about one-third of income taxes on Canadian corporations, what the provinces do can enhance or offset such federal actions. In this case, provincial actions reinforced the federal move. Ontario, which accounts for almost 40 percent of the corporate tax base, soon announced its intention to lower both the basic rate and the manufacturing rate from 15.5 percent and 13.5 percent, respectively, to 8 percent by 2006 (Ontario, 2000). Alberta, following the report of the Alberta Tax Review Committee (2000), announced a similar reduction in its corporate tax rate, to be fully implemented by 2005. In total, these federal and provincial changes will reduce the combined federal/provincial corporate income tax rate by about 10 percentage points — from 43 percent (provincial rates weighted by capital allocation to the provinces) to 33 percent for all corporations by 2006. What provinces do with respect to the taxation of business is important.

The time thus seems ripe to reconsider the appropriate role, level, and structure of provincial business taxation. The next section of this *Commentary* describes the current system of provincial business taxes and some of the problems that arise from it. The third section builds on earlier work by Bird and Mintz (2000) to offer an alterative approach to provincial business taxation that we call the "business value tax" or BVT. The last section discusses the major issues that would have to be resolved before such a system could be introduced. While, of course, many detailed matters require further investigation, we think that all the possible technical problems can be overcome if the political will is there. The Appendix discusses one recent case in which such will was found — that of Italy in 1998 — along with several other precedents for the BVT approach to provincial business taxation.

Provincial Taxation of Business

Table 1 sets out some of the basic parameters of the main taxes on business in 2001 in the different provinces. Basic statutory provincial CIT rates range from 9 percent in Quebec to 17 percent in Manitoba and Saskatchewan. Some provinces apply lower rates on manufacturing, and all except Quebec apply lower rates on small business. Seven provinces apply general capital taxes, all except Alberta apply such taxes to certain financial institutions, and four provinces apply some form of general payroll tax. Five provinces, including Ontario and British Columbia, still levy substantial taxes on business inputs through their so-called retail sales taxes (Kuo et al. 1988). In all provinces, business property is subject to often differentially heavy real property taxes (Kitchen 1992).

The general CIT rate is 9 percent in Quebec and between 14 and 17 percent in the other provinces. Manufacturing rates are somewhat more variable. Rates in Quebec, Newfoundland, and P.E.I range from 5 to 9 percent, and rates in the other provinces range from 12.8 percent in Ontario to 17.0 percent in Saskatchewan and Manitoba. Small business rates, for Canadian-controlled private companies with incomes below $200,000, are much lower in all provinces except Quebec, ranging from 4 percent in New Brunswick to 7.5 percent in Prince Edward Island.[1]

Most provinces lowered corporate income tax rates in their 2001 budgets.

Most provinces lowered CIT rates in their 2001 budgets. As already mentioned, Alberta and Ontario are reducing them further over the next few years. When these reductions are fully phased-in, Quebec, Alberta and Ontario, which together account for almost 80 percent of corporate taxable income in Canada, will have basic and manufacturing CIT rates of 8 or 9 percent. With federal reductions also phased in, the basic *combined* federal/provincial CIT rate will be 30.1 percent in Ontario and Alberta, and 31 percent in Quebec. Provincial rates in most of the other provinces will still exceed 14 percent. Barring further changes, their CIT rates will be 6 to 9 percentage points higher than Alberta, Ontario and Quebec.

The statutory CIT rate is only one factor in determining the "competitiveness" of any province's tax system. Equally important is the tax base, which is determined by the various rules and regulations that govern the rate and nature of various deductions and write-offs against corporate revenue, as well as tax credits associated with certain types of investments (for example, research and development), and tax holidays that further reduce corporate tax liability. Generous write-offs and credits can negate the impact of a high statutory tax rate. One way of taking into account these factors and other levies on business, such as capital taxes, in determining the overall "competitiveness" of the business tax regime is to calculate and compare the *marginal effective tax rate* (METR) on capital in different provinces (or countries). METR calculations cover not only differences in tax rates but also various deductions and credits (Chen 2000).

The idea behind METRs is conceptually quite simple. A profitable investment must generate an expected after-tax rate of return that at least compensates investors for forgone investment opportunities. The METR measures the size of the tax impact (the "tax wedge") as a proportion of pre-tax income for a marginal

1 Small business rates are phased out for CCPCs earning income greater than $200,000. Corporations earning income greater than $400,000 are not eligible for the lower rate.

Table 1: ***Main Features of Provincial Business Taxes in Canada, 2001***

	Corporate Income Tax (Small Business)		Corporate Income Tax (General)		Corporate Income Tax (Manufacturing)		Sales Taxes		Payroll Tax	Capital Taxes[c]
	Province	Total[a]	Province	Total[a]	Province	Total[a]	Rate	Type[b]		
					(percent)					
Newfoundland	5.0	18.1	14.0	42.1	5.0	27.1	8	HST	2.0	0/4
Prince Edward Island	7.5	20.6	16.0	44.1	7.5	29.6	10	PST	—	0/3
Nova Scotia	5.0	18.1	16.0	44.1	16.0	38.1	8	HST	—	0.25–0.5/3
New Brunswick	4.0	17.1	16.0	44.1	17.0	39.1	8	HST	—	0.3/3
Quebec	9.0	22.1	9.0[d]	37.1[d]	9.01	31.1	7.5	GST+	4.26	0.64/1.55
Ontario	6.5	19.6	14.0	42.1	12.82	34.9	8	PST	1.95	0.3/0.6–0.9
Manitoba	6.0	19.1	17.0	45.1	17.0	39.1	7	PST	2.15–4.3	0.3–0.5/3
Saskatchewan	7.0	20.1	17.0	45.1	17.0	39.1	6	PST	—	0.6/0.7–3.25
Alberta	5.3	18.4	13.9	42.0	14.5	36.6	0	—	—	0/0.7–2
British Columbia	4.5	17.6	16.5	44.6	16.5	38.6	7	PST	—	0.3/1–3

[a] Combined federal and provincial corporate income tax rates.

[b] Sales taxes: HST: harmonized sales tax; GST+: base similar to GST; PST: retail sales tax.

[c] Capital taxes are general/bank rates.

[d] A higher rate applies to passive (investment) income.

Sources: Treff and Perry 2001; Perry 2001.

investment (one that just yields the required minimal after-tax return, or "hurdle rate"). Suppose, for example, that investors require an expected rate of return after taxes of at least 5 percent in order to entice them to invest in a corporation. Say that, under the existing business tax regime in a jurisdiction, a corporation needs to generate a rate of return, on average, of 10 percent *before* the payment of corporate taxes in order to yield 5 percent *after* taxes. The METR in this case would then be 50 percent, calculated as (10 – 5)/10. A high METR relative to other jurisdictions implies, all else being equal, a noncompetitive tax regime.[2]

Although the METR is simple in concept, calculations of it can be quite complex, owing to the complexity of tax regimes. Table 2 presents METR calculations for the Group-of-Seven (G-7) countries under both current tax regimes and announced intentions.[3] In Canada, the announced federal CIT rate reduction will apply only to

2 This statement assumes that other things (for example, infrastructure, the environment) are roughly equal in the jurisdictions being compared, which seems reasonable in the provincial context or in developed countries generally. The METR calculations we report relate to large taxpaying firms only and not to small firms, which are generally subject to lower statutory rates, or to firms with losses.

3 The METRs reported in Table 2 are a weighted average of the effective tax rates on buildings, machinery and equipment, land, and inventories. The calculations do not incorporate various industry-specific tax incentives (though broader incentives are included), tax holidays for new firms, or property taxes. They include corporate income taxes (and all of the associated provisions), capital taxes, and sales taxes levied on businesses in countries that do not impose value-added-type sales taxes. The effects of industry-specific tax incentives tend to be lost in the aggregation to the two broad categories of manufacturing and services. Tax holidays are typically available to new firms only, so the METRs reported here can be viewed as applying to mature, fully taxpaying firms. The absence of property taxes is more problematic. Unfortunately, we are not aware of any data that allow us to determine effective property tax rates in a way that is comparable across countries, or even across provinces in Canada.

Table 2: ***Marginal Effective Tax Rates on Capital: International Comparisons***

	Manufacturing		Services	
	2000	Intentions*	2000	Intentions*
		(percent)		
Canada	24.9	23.4	33.0	26.3
United States	23.6	23.6	24.8	24.8
United Kingdom	17.2	17.2	17.2	17.2
Germany	32.1	19.8	31.6	15.6
France	22.7	22.7	25.3	25.3
Italy	18.1	18.1	18.1	18.1
Japan	22.6	22.6	24.0	24.0

* Based on announced intentions as of May 2000. For Canada, this incorporates CIT rate reductions announced in the 2000 federal, Ontario, and Alberta budgets. The reduction in the German CIT rate will be effective in 2001. The federal rate reduction in Canada is intended to be phased in fully by 2005, as will the rate cuts announced in Alberta; Ontario's rate reductions are intended to be fully implemented by 2006.

Source: Authors' caculations.

the basic tax rate, while announced reductions in Ontario and Alberta will apply to both the basic and manufacturing rates. Canada's manufacturing METR thus falls only slightly after 2000. Even after the announced reductions, it is virtually the highest in the G-7, just a bit lower than that of the United States — and then only under the somewhat implausible assumption that there will be no further reductions in the United States. Similarly, the announced rate cuts go some considerable distance toward addressing Canada's lack of competitiveness in the services sector, but Canada will still have the highest METR in the G-7 in this sector. Furthermore, the border-eroding effects of developments in technology seem likely to be particularly acute in the services sector.

How do METRs compare interprovincially? Table 3 presents combined federal/provincial METR calculations for all provinces for 2000 and in light of anticipated CIT reductions to be phased-in over the next five years.[4] An interesting feature of these calculations is the importance of provincial capital taxes, as well as provincial sales taxes on business inputs in British Columbia, Saskatchewan, Manitoba, Ontario, and Prince Edward Island.

Quebec has the lowest general (nonmanufacturing) provincial CIT rate but also imposes the highest provincial capital tax rate. Consequently, it has a higher METR on capital than Alberta, which imposes a substantially higher statutory CIT rate but no capital tax.[5] Ontario's CIT rates are lower than Alberta's, but Alberta has a lower METR because it has neither a capital tax nor a sales tax on business inputs. Saskatchewan and Manitoba have the same statutory CIT rate, and levy sales taxes on business inputs, but Saskatchewan has a higher METR because its capital tax is slightly higher. While it is not surprising that provincial capital taxes and non-GST style sales taxes increase the METR on capital, the size of this effect, and hence the potential importance of these taxes in affecting investment decisions across provinces, is not widely recognized.

Consider now the impact of the announced CIT reductions at the federal level and in Ontario and Alberta. Because the federal rate cuts do not apply to manufacturing, the manufacturing METRs in the other provinces do not change. Since Alberta and Ontario rate reductions do apply to manufacturing, the

4 The METR calculations in Table 3 (and subsequently) include the CIT (and associated provisions), capital taxes, and sales taxes levied on business inputs in provinces that do not levy VAT-type provincial sales taxes (British Columbia, Saskatchewan, Manitoba, Ontario, and Prince Edward Island). The calculations do not account for provincial tax holidays offered to new firms, nor do they include property taxes or industry-specific incentives.

5 Neither province imposes significant taxes on businesses inputs via the sales tax, Alberta has no sales tax, and Quebec levies a GST-style value-added tax (although it does not allow full crediting for all capital investment expenditures).

Table 3: ***Marginal Effective Tax Rates on Capital, by Province***[a]

	Manufacturing		Services	
	2000	Intentions[b]	2000	Intentions[b]
		(percent)		
British Columbia	27.9	27.9	35.9	31.1
Alberta	21.6	17.3	30.6	19.8
Saskatchewan	26.8	26.8	38.3	33.7
Manitoba	30.0	30.0	37.7	33.0
Ontario	25.6	23.1	33.8	25.8
Quebec	24.2	24.2	31.1	26.8
New Brunswick	26.0	26.0	34.1	28.9
Nova Scotia	24.9	24.9	32.9	27.8
Prince Edward Island	19.9	19.9	33.4	28.2
Newfoundland	15.5	15.5	29.4	24.0

[a] Combined federal/provincial METRs.

[b] Incorporates CIT rate cuts at the federal level and in Ontario and Alberta. All of the rate reductions will be fully implemented by 2006.

Source: Authors' calculations.

manufacturing METR falls slightly in both provinces. Indeed, Alberta's manufacturing METR falls below that in all the G-7 countries (see Table 2). The federal rate reductions lower the services sector METR in all provinces, and the provincial reductions in Alberta and Ontario push their rates even lower. The METR on capital in the services sector in Alberta will be the lowest in the country, significantly lower than that in Ontario because Alberta has no capital tax or sales tax on business inputs.

What's Wrong with Provinces Taxing Business?

Economists are sometimes accused of agreeing on almost nothing. An important matter on which many agree, however, is that there is little to be said in favor of taxing corporations. The primary reason for such unanimity is the substantial economic costs associated with imposing taxes on corporations (Gravelle 1994). Choices with respect to organizational form (the incorporation decision), financial structure (debt-equity ratio), and dividend policy (payout ratio) may be distorted by taxes on corporations. At the margin, investment decisions with respect to industry, asset mix, location, risk taking, and timing, whether made by corporations or by other forms of business enterprise, may all be influenced by variations in effective tax rates (Mintz 1995; Chen and McKenzie 1997). Decisions about allocation of capital over time are also affected by taxes on capital income, with the result that private savings are distorted. The complexity of taxes may also impose significant costs and barriers to expansion for new and small firms, and uncertainty as to the precise tax implications of business decisions may act as a general deterrent to investment. All in all, the costs of corporate taxation are sufficient to persuade most economists that there is little, if anything, to be said on efficiency grounds for corporation taxes and not much for most taxes on business in general. On the contrary, there may be substantial economic gains from reducing or even eliminating most existing business taxes.

Most of the economic costs of business taxes are larger the more mobile is capital. Since capital is decidely more mobile interprovincially than internationally, the general case against the taxation of corporate capital is even stronger at the provincial level. Helliwell (1998) suggests that national borders still impose significant costs on transnational transactions between countries with different currencies, different laws, and a physical "filter" through which most trade and investment transactions still have to pass. Provincial borders are less insulated, so interprovincial flows of factors and products may well be more strongly affected by policy differences. Helliwell and McKitrick (1999), for example, show that interprovincial capital mobility is much higher than international mobility, with the correlation between savings and investment for individual provinces in Canada

Capital tax competition may be considerably more important at the provincial level than at the national level.

being statistically indistinguishable from zero.[6] The Technical Committee on Business Taxation (1998) reported considerable variance among provinces in terms of both their METRs and the growing importance of nonprofit taxes. Since capital flows easily across provincial borders, capital tax competition, and its efficiency implications, may be considerably more important at the provincial level than at the national level.

The so-called basic tax competition model (Wilson 1999) demonstrates that competition over the capital tax base can lead to an inefficiently low tax rate on capital and correspondingly low provision of public goods. The idea behind this "basic" result is simple. If the total amount of capital is fixed but mobile between two regions, and there are no other regions, then an outflow of capital from one region is an inflow to the other. An increase in the tax on capital in one region thus creates a positive externality in the other region because the outflow of capital benefits the residents of the other region. But each region's government is properly concerned only with the welfare of its own residents, and therefore will not take this external effect into consideration when setting its tax rates. Both regions will thus set their tax rates — and therefore their levels of public good provision — inefficiently low. In this simple model, the "race to the bottom" that many fear will result from globalization becomes a reality.

Of course, there are other analytical frameworks in which competition that keeps tax rates down has positive effects. One example is the so-called commitment problem, when the inability of governments to commit credibly not to increase taxes once investments are made means that fewer investments are made (Kehoe 1989). Another is the public choice model, which suggests that, in the absence of competition, governments may tend to be inefficiently large (see, for example, Edwards and Keen 1996). Similarly, when governments can, in effect, "export" taxes by shifting the tax burden to nonresidents — for example, by taxing nonresident owners or through the workings of the equalization system — they tend to levy taxes that are inefficiently high.

Is there any evidence that provinces actually use business tax rates to compete for capital? In a recent study, Hayashi and Boadway (2000) find evidence that all provinces except Ontario reacted to an increase in the business tax rate in other provinces by increasing their own business tax rate. Although Ontario's tax rate had a positive effect on all other provinces, Ontario itself did not appear to be affected by the tax rates of other provinces. As Courchene and Telmer (1998) note, Ontario officials often observe that what happens in Michigan or Ohio is more relevant for them than what happens in Quebec or Alberta (Ontario 2000). While this does not explain why business taxes remain higher in Ontario than in neighboring US states, similar sentiments are not unknown further west, as the recent Alberta Business Tax Review (2000) shows. Similarly, the current Quebec government sees *Québec en Amèrique* as a more relevant sphere for policy action than Quebec-in-Canada.

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6 As Dahlby (2000) shows, one must be cautious in interpreting correlations between saving and investment as reflecting capital mobility. In a simple endogenous growth model for a small, open economy, for example, a higher savings rate results in more investment in human capital and, since human capital is complementary to physical capital, also in an increase in the investment rate.

Quebec differs from other provinces in one important respect, however. As Bird and Vaillancourt (2000) note, Quebec francophones, most of whom are unilingual, are much less likely to migrate to the rest of Canada — to them a "foreign" country — than are anglophones or allophones. They are to a considerable extent a captive audience, so that the province — "their" government — is more important to them than is the case in the rest of the country. One consequence is that Quebec's policies matter more to Quebec residents than is true of provincial policies in other provinces.

Quebec has made more extensive use of programs aimed specifically at fostering new businesses than any other province. For example, a recent Price-Waterhouse-Coopers (PWC) survey (*Globe and Mail*, October 18, 2000, p. B3) ranked Montreal fourth among the 15 largest cities in North America (Toronto ranked sixth) in its per capita concentration of high-technology jobs. In commenting on these results, a PWC partner noted that "Quebec was one of the provinces with the best tax incentives for the high-technology industry" and that these incentives — for example, fiscal encouragement to local high-tech businesses in a designated area of Montreal — had "contributed greatly" in attracting high-tech workers and companies. Growing awareness of the importance of competitive business taxes in other provinces may lead them to emulate Quebec's wholehearted leap into the world of "targeted" tax incentives. The latest Ontario budget suggested this. Are other provinces likely to lag far behind? Is further proliferation of such narrowly targeted incentives either effective or desirable?[7]

An alternative strategy of "low rates, broad bases" is also possible, as Alberta has recently shown. On the other hand, some poorer provinces in fiscally desperate straits may attempt to maintain or even increase their attempts to tax those firms "trapped," at least for the time being, within their tax net. Similarly, the need for revenue to finance health, education, and other social services may lead some provinces to rely even more heavily than they now do on "nonprofit" taxes levied at the corporate level, such as those on payrolls and capital.[8] As provincial taxes — especially in the richer provinces — become relatively more important, the interprovincial and international pressures resulting from, and in turn leading to, such fiscal manipulation may become more marked. Both external and internal forces thus suggest that provincial business taxation will be under close scrutiny over the next few years.

Provincial business taxation will be under close scrutiny over the next few years.

The Costs of Provincial Taxes on Business

Provincial taxes on capital, such as the corporate income tax, are costly for a number of reasons: the high degree of international and intranational mobility of the tax base, the ease with which businesses can shift income across boundaries, and the difficulties of enforcing taxes in such circumstances, particularly in smaller provinces. How costly are they? This depends on many things, including the effect

7 We raise this question but do not attempt to answer it in this paper. For a skeptical review of experience with such incentives around the world, see Bird (2000).

8 As shown in Table 2, seven provinces levy general capital taxes and all provinces levy such taxes on certain financial corporations. For a detailed discussion of provincial capital taxes, see McQuillan and Cochrane (1996).

of taxes on economic growth and investment and associated distortions in the allocation of capital, which are not easy to measure.

The relationship between economic growth and taxation is murky. Some recent studies have suggested that it is not so much the *level* of taxation that affects economic growth as the *structure*, or composition, of the tax system. In particular, there is growing evidence that countries that rely more heavily on personal and corporate income taxes exhibit lower growth rates than countries that rely on consumption and sales taxes.[9] From one-third to one-half of the increase in per capita gross domestic product (GDP) in the United States over the past decade is estimated to be due to increases in the capital stock, the rest coming from technological innovations that, many argue, tend to be embodied in new capital (Cummins 1998). This suggests that the impact of taxation on investment is important for economic growth.

The impact of taxation on investment is important for economic growth.

In particular, although early empirical studies of the impact of business taxes on investment (based on aggregate data) tended to find rather small effects, more recent evidence (based on firm-level data and new empirical techniques) suggests that corporate taxes have a significant impact. For example, a recent study by Chrinko, Fazzari, and Meyer (1999) suggests that, in the United States, a 1 percent increase in the tax-adjusted user cost of capital — a concept closely related to the METR discussed above — leads to a 0.25 percent reduction in the capital stock. Similarly, in a multicountry study that included Canada, Cummins, Hassett, and Hubbard (1998) find that a 1 percent increase in the cost of capital can lead to a decrease in investment in machinery and equipment by as much as 1 percent. High rates of tax on capital do, it seems, tend to depress investment.

Some evidence also supports the proposition that business taxes affect firm location decisions for multinationals. For example, Devereux and Griffith (1998) find that effective tax rates were an important determinant in the location of foreign direct investment by US multinationals in Europe. Papke (1991) finds that state tax differentials help explain differences in manufacturing firm start-ups across the United States. After controlling for state and industry specific effects, a high METR reduced the number of new firm "births" in over half of the industries examined.

Such evidence suggests that taxing capital at the corporate level distorts investment decisions, lowers the capital stock, and impedes growth because scarce capital is reallocated from more productive to less productive uses. The efficiency cost of capital taxes is essentially the value of the output forgone when taxes divert capital from its best uses. As we noted earlier, taxes can distort the allocation of capital across time, across assets, across sectors, and across locations. They can also impact financing decisions and the social allocation of risk.

Estimating the costs of these distortions is a complex task. We are aware of no study that examines the efficiency costs of capital taxes along all of these dimensions. In a recent survey of efficiency considerations in corporate tax reform, Whalley (1997) suggests that most studies at the country level estimate the efficiency cost of capital taxes to range from about 0.75 to 1.0 percent of GDP. These numbers may seem small, but they persist from year to year and suggest large

9 See, for example, Kneller, Bleaney, and Gemmell (1999); Engen and Skinner (1996).

cumulative effects. Although most studies do not incorporate all of the distortions discussed above, Whalley suggests that the most pronounced efficiency costs arise from distortions across various assets, with distortions across time and sector imposing somewhat less pronounced costs.

Most studies of the efficiency costs of capital taxes examine countries as a whole. Since Canadian provinces are small, open economies and capital is very mobile between provinces, provincial economies face a more elastic capital supply function than countries. It is therefore likely that the efficiency costs of distortionary taxes on capital are greater at the provincial level than at the country level.

The efficiency costs of distortionary taxes on capital are greater at the provincial level.

Theory, empirical evidence, and common sense thus all seem to point to the desirability of reducing effective tax rates on capital at both the federal and provincial levels. Mintz (2000) argues that Canadian tax policy needs to be better than average (in the sense of imposing lower METRs) if Canada is to compete internationally for capital with the United States, its closest neighbor and the biggest and most productive economy in the world. Given the importance of provincial taxes on business, provincial tax policy is potentially important in this respect. In addition, once lower CIT rates are in place in Ontario and Alberta, the other provinces will find it difficult to maintain their corporate income tax rates, (aside from Quebec, where rates are already lower, although offset to some extent by other taxes on capital in that province).

Hayashi and Boadway (2000) argue that Ontario, like Quebec, is in economic terms not a province *comme les autres*. Ontario's tax policy may, as provincial policymakers often say, respond more to taxes across the US border than to taxes in other provinces, while other provinces have to respond to Ontario and to international competitive pressure, including that channeled through Ontario, if they want to stay competitive. How much they may reduce corporate income taxes in response to Ontario remains an open question. The cuts required to match the measures Ontario has already announced will not come cheaply. For example, ignoring both behavioral changes and supply-side effects, the reduction in Alberta's CIT rate announced in 2000 would cost about $900 million in forgone revenue per year (1999 dollars).

A common response to the demonstrable inefficiencies associated with provincial business tax competition is simply to assert that the provinces should get out of the business of taxing business altogether.[10] Do the recent moves by Ontario and Alberta to cut their corporate tax rates, followed by smaller cuts in the 2001 budgets of a number of other provinces, signal the start of a *de facto* withdrawal of the provinces from the corporate tax field? Has the race to the bottom finally begun at the provincial level?

The question we consider in the remainder of this *Commentary* is whether provincial policymakers can do something more than simply go along with the international tide toward lower statutory corporate income tax rates — a move that might be complicated in at least some provinces by various abortive attempts at reallocating investment resources in accordance with current fashions and local political necessities.

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10 For some representative discussions, see Boothe and Hermanutz (1997); McKenzie (1997); Ruggeri, Howard, and Van Wart (1993); Dahlby (1992); and Mintz and Wilson (1991).

A Better System of Provincial Business Taxation

The Case for Provincial Business Taxes

There is a good economic case for some provincial (and local) taxation of business.

We think there is a good economic case for some provincial (and local) taxation of business on generalized benefit grounds. Three distinct arguments support provincial taxes on business: an efficiency argument, an equity argument, and a political argument. In economic terms, the most meaningful case for taxing business derives from one of the oldest principles of taxation, the *benefit principle*. To the extent that particular public activities result in identifiable cost-reducing benefits for particular firms, they can and should be charged for the costs of such benefits. Whenever feasible, user charges should thus be applied to business firms, as to any other direct beneficiary (Bird and Tsiopoulos 1997). For example, businesses should incur extra charges if their waste is more costly to dispose of than household waste, and users of large trucks should be charged for their wear and tear on roads and highways.

In addition to public services provided directly to specific identifiable private firms, however, a significant fraction of public expenditures, particularly at the local government level, directly benefits businesses. Kitchen and Slack (1993) estimate, for example, that, on average, close to 40 percent of noneducation municipal expenditures in eight Ontario cities accrued to commercial and industrial activities (less than 20 percent if education is taken into account). Similarly, Oakland and Testa (1995) estimate the "business share" of state and local expenditures in the United States to be 13 percent (again assuming, arguably, that business receives no benefits from educational expenditures). Although in both these cases the taxes levied on business actually constituted a higher share of the taxes levied by the respective governments than these estimated benefit shares, the point is that a solid efficiency case can be made for levying some form of "generalized benefit tax" on business to cover such "unattributable" benefits to productive activities.[11]

From an efficiency perspective, it is actually *essential* to levy taxes on resident firms and individuals who benefit from public services. Doing so minimizes the horizontal spillovers that otherwise arise from two distinct sources (Mintz and Tulkens 1986). First, to the extent that nonbenefit taxes are paid by nonresidents rather than residents, the size of government may be excessive, since nonresidents pay (through "tax exportation") for services enjoyed by residents. This outcome is particularly likely with respect to such taxes on business as CIT, capital taxes, and nonresidential property taxes. A second horizontal spillover arises from the tax competition (or "tax base flight") discussed earlier. In this case, a jurisdiction may choose tax levels that are "too low" for fear of losing tax base to other jurisdictions. In either case, there are efficiency costs because the allocation of resources is distorted.

11 Feehan (1998) argues that much government spending produces services that enhance the productive capacities of firms, and provides an interesting theoretical rationale for such a tax under certain conditions. As Bird (1996) notes, this benefit argument for imposing "tax-prices" in the form of a generalized business benefit tax should not be confused with some of the less tenable versions of the benefit rationale for taxing corporations that may be found in the literature.

In reality, the taxes levied on business are usually considerably higher than can be justified on such benefit grounds. The competitive pressures mentioned earlier seem to be bringing provincial (and federal) business taxes somewhat closer to levels that may be justified on benefit grounds, but they are unlikely to reach this level owing to the obvious political feasibility — perhaps even the political necessity (Sorensen 1995) — of such taxes.

Another argument supporting business taxation rests on a widespread and strong belief that jurisdictions in which economic activities take place are in some sense "entitled" to part of the proceeds, regardless of whether the government services contribute anything to production or whether any of the output is consumed within the jurisdiction. The common conflicts over natural resource revenues, for example, arise in part at least from such deeply held, if seldom articulated, beliefs. This *entitlement principle* can be extended to encompass business taxes more generally.[12]

One may, of course, accept or reject any such equity argument but the entitlement concept, combined with the benefit argument, seems the strongest logical case that can be made in support of taxes on business. Often, however, politicians and the public take exactly the opposite position, that business taxes, especially those on large corporations, are among the best of all taxes. This common preference may, in part, be a perversion of the well-known ability-to-pay principle of taxation. A particularly naive version of this argument is that, since corporations are separate legal "persons" and some have a lot of money, they must have substantial "ability" to pay taxes and should therefore do so. Popular as such arguments are — witness the numerous media articles deploring the decline in the share of corporate taxes — they are clearly fallacious. Only people, not things, can "pay" taxes in the sense of having their private real incomes decreased. Indeed a major problem with corporate taxes from the equity perspective — though perhaps this too may perversely be one of their attractions — is that no one can be very certain who is actually paying them. The burden of corporate taxes may fall on labor, land, equity owners, consumers, or some combination thereof, and it is surprisingly difficult to assess exactly how the burden is likely to be distributed (Whalley 1997).

Taxation is at least as much a political as an economic phenomenon.

Taxation is at least as much a political as an economic phenomenon. Governments go against popular perceptions at their peril in deciding who should pay, how much, and in what way. Despite decades of economic argument to the contrary, the popular feeling is that businesses in general and large corporations in particular should pay much larger taxes than can be justified on benefit grounds, and governments have to bow to these winds at least to some extent.[13] If the political cost of raising taxes from corporations is low, it may be perfectly rational to impose such taxes even if the economic cost is high. From a government perspective, both

12 The "entitlement" principle has recently been articulated in the international context by McLure (2000). It is equally observable at the subnational level in most countries, notably with respect to resource taxes (McLure and Mieszkowski 1983).

13 As the Ontario Fair Tax Commission (1993, 399) said, "for many of those who appeared at our hearings, declining revenue shares from corporate income and capital taxation stood as a symbol of increasing unfairness in our overall system of taxation." This symbolic aspect of taxation is developed further in Bird (1991).

the economic and political costs are real, and the optimal tax policy will equate total costs at the margin with total benefits (Gillespie 1991; Hettich and Winer 1999).

Corporate income taxes and other taxes on business may thus be economically irrational but nonetheless make perfect sense in the larger political economy picture. Of course, such arguments need to be used with caution. When taxes induce significant economic distortions, as do most forms of business taxation, the associated costs — even though usually hidden from public and political eyes — must be explicitly weighed against possible gains in terms of public acceptance from raising revenue in this way. Fortunately, as we argue in the rest of this *Commentary*, provincial business taxation appears, within limits, to be a rare case in which we can "have our cake and eat it too." That is, it may be possible to continue to tax businesses at more or less present levels, but in an economically less costly fashion.[14]

Provincial business taxation appears, within limits, to be a rare case in which we can "have our cake and eat it too."

The political realities of governing in a democratic society are such that business taxes will be imposed whatever economists may say (Pola, 1991). The important question is not *whether* we should impose provincial taxes on business, but rather *how* we should impose them. International and interprovincial competition is already lowering provincial business taxes and may soon lead to further desirable moves, such as the removal of sales taxes on business inputs in Ontario and perhaps further reductions in provincial capital and corporate income taxes. We suggest, however, that the most sensible and efficient way for provinces to tax business is not by continuing to adjust a basically mistaken structure but rather by taking a new direction. Porter and Martin (2000) argue that "international competitiveness results from firm level choices that produce *distinctiveness*, not from *replicating* the choices of other firms, regions or nations" (emphasis added). In the present context, what this suggests is that, rather than responding to competitive pressures by simply reducing the rates of existing taxes, we should consider bold, distinct policy innovations. In a recent paper, Bird and Mintz (2000) present a proposal that we think would move provincial business taxation in the right direction. The proposal is essentially that the provinces move to a "business value-added tax," or what they call a *business value tax* (BVT).

The Business Value Tax

The arguments for provincial business taxes suggest that a broad-based levy neutral to factor mix should be imposed, such as a tax on value added. Interestingly, as Sullivan (1965) has documented, the original conception of the VAT (by Adams 1918) was as a business benefit tax. More precisely, as Allan (1971) and Meade (1978) suggested, from rather different perspectives, the most

14 Although some have suggested to us that the argument for a BVT as preferable to a CIT may equally well be applied at the federal level, we do not agree. First, some of the reasons why a federal CIT makes sense (Bird 1996; Technical Committee on Business Taxation 1998) do not apply to provincial CITs. Second, the benefit rationale is stronger at the provincial level because a much higher proportion of provincial than of federal spending provides inputs to productive activity. Finally, and conclusively, our focus in this paper is on a provincial tax issue that has not received nearly enough attention to date, and not on federal tax reform.

appropriate form of VAT for this purpose is a "value-added income tax" or a VAT levied on the basis of income (production, origin) rather than a consumption (destination) VAT such as the goods and services tax.[15]

Businesses add value by combining labor and capital with other purchased inputs. The value added by labor is the cost of wages and salaries, while the value added by capital is the cost of debt and equity. The BVT base that Bird and Mintz (2000) propose consists of revenues, less purchases of current nonlabor inputs, depreciation allowances, and royalties paid to the Crown. From an administrative perspective, this tax base could be calculated in two ways. The first is simply to add back the appropriate amounts of interest and wages to the CIT base as currently calculated. The second is to eliminate the provincial corporate income tax altogether and replace it with an appropriate combined payroll tax on wages and salaries and explicit capital tax on capital.[16] Since such payroll and capital taxes already exist in a number of provinces, we shall return to this possibility later. For the moment, however, we shall consider further how the BVT base compares to the present CIT base, since this proposed new levy should first be considered as a potential substitute for the existing inefficient provincial CITs.

The appropriate tax base for an income tax is economic income.

From an economic perspective, the appropriate tax base for an income tax is *economic income*. This requires deduction from revenues of the *opportunity cost* of all of the inputs used in production (that is, current expenses, including labor, interest associated with debt, the opportunity cost of equity finance, and economic depreciation). If the appropriate deductions are made, and the corporate tax is levied on a base consisting of economic income, the METR on corporate capital would be zero. In reality, as discussed earlier, METRs on corporate capital are hardly zero in Canada or anywhere else. Corporate income tax is not a tax on economic income but a tax on equity capital, because payments for debt-financed capital (interest) are deductible, but payments for equity-financed capital (the opportunity cost of equity) are not. The opportunity cost of equity finance arises from the fact that investors in corporations have the opportunity to invest their funds, and earn a rate of return, elsewhere. The need to generate a high enough return to attract investors is no less a cost of doing business than the need to generate a high enough return to pay the interest on debt. Because the CIT does not permit deductions for the opportunity cost of equity finance, it can be viewed as an implicit tax on equity financed corporate capital. Such discrimination serves no rational purpose and is economically costly.

In addition, the tax on corporate capital introduces another important inefficiency by changing the relative prices of labor and capital.[17] Moving to a

15 A similar conclusion has been reached at various times by many analysts in the United States. See ACIR 1978; Miller 1988; Cline 1988; Oakland 1992; Aten 1992; Oakland and Testa 1995; 1998; Ebel 2000; Papke 2000.

16 Although the two approaches are effectively identical for a fully taxpaying firm, they may differ for nontaxpaying firms, depending on the nature of loss offsetting. Under the second approach, all firms will pay taxes regardless of their profitability. Under the first approach, firms could be in a loss position and therefore not pay BVT in a particular year. The treatment of losses in this case can have a big effect on the METR.

17 Of course, labor is taxed under other parts of the tax system, such as the personal income tax and payroll taxes.

business tax base that does not discriminate against capital relative to labor will not only generate the usual benefits associated with lower taxes on capital but also reduce the inefficiencies associated with taxing labor and capital at widely divergent rates.

The business value tax explicitly imposes a tax on corporate capital in a more efficient and sensible manner.

Although the BVT *explicitly* imposes a tax on corporate capital, compared to the *implicit* tax imposed by the CIT, it does so in a more efficient and sensible manner. By including the value added by labor in the tax base along with capital, it allows for a substantial reduction in the effective tax rate on capital. Moreover, by eliminating interest deductibility, it taxes equity capital at the same rate as debt capital, reducing another distortion caused by the corporate income tax.[18]

Compared to a conventional value-added tax such as the GST, a BVT has two important distinguishing features. It is a tax on income, not consumption. That is, it is imposed on profits as well as wages, which means it taxes investment as well as consumption.[19] And since it is imposed on an origin rather than a destination basis, in effect it taxes exports but not imports. In addition, a BVT is assessed by the subtraction or addition method rather than the more familiar invoice-credit system, and is collected on an accounts rather than a transaction basis, but these distinctions are less important.[20]

How High Would a BVT Have to Be?

Tables 4 and 5 present revenue-neutral provincial BVT tax rates, estimated for 1999 by Bird and Mintz (2000), as replacements for the provincial CIT alone and in

18 An alternative approach would be to go in the other direction and remove the tax on capital altogether. One way is to allow a deduction for the cost of equity finance under the existing income tax. While possible in theory, this is difficult to do in practice due to the obvious measurement problems, and is likely to generate other distortions. Another approach is to disallow deductions for the cost of debt and equity, as under the BVT proposal, but to allow for the immediate deduction of capital expenditures rather than depreciating them over time. Although a cash flow tax is a conceptually simple way of eliminating the tax on business capital, and has been recommended many times before in other contexts, it has not so far been adopted anywhere, largely owing to international and transitional considerations (Mintz and Seade 1991; McLure and Zodrow 1996). The base of any income tax in Canada has to be close enough to that of the US income tax to ensure creditability in that country, which means, under the existing rules as commonly understood, that it must permit full interest deductibility.

19 Note that if capital is expensed rather than depreciated, the BVT becomes a consumption-based rather than income-based tax. Financial income would not be included in the BVT tax base, and interest on borrowed funds would not be deductible. A special regime would thus be necessary with respect to financial institutions and insurance companies, since most of their value-added would not be included in the tax base. Presumably, one would need to levy a combination of capital and payroll taxes on this sector, but we do not try to take this complication into account in our estimation of the value of the BVT tax base.

20 From one perspective, a system in which, in effect, two different types of value-added tax are imposed simultaneously might seem odd — as indeed it did to many when a similar approach was first proposed in Meade (1978). But the apparent oddity resides largely in the similarity of the names. If it makes sense to levy taxes on both consumption and income in terms of base, as it may, it may equally make sense to levy one or both (or parts of each) indirectly in the value-added form at the business level, as well as directly on income and/or consumption at the personal level.

Table 4: ***BVT Rates to Replace 2000 Provincial Revenues from Business Taxes: Provincial Allocation of Business Value Added using Provincial Shares of Canadian Total Value Added***

	CIT	CIT+ Capital Taxes	CIT+Capital Taxes + 5% of Property Taxes	CIT+Capital Taxes + 5% of Property Taxes + Payroll Taxes
			(percent)	
British Columbia	2.5	3.2	3.5	3.5
Alberta	3.5	3.6	3.9	3.9
Saskatchewan	3.0	4.9	5.3	5.3
Manitoba	1.3	2.4	2.7	4.2
Ontario	3.3	4.1	4.5	6.1
Quebec	1.8	3.8	4.1	8.0
New Brunswick	1.6	2.3	2.6	2.6
Nova Scotia	1.1	1.6	1.9	1.9
Prince Edward Island	1.5	1.6	1.9	1.9
Newfoundland	2.8	3.3	3.5	4.8
Total	2.7	3.7	4.1	5.7

Source: Bird and Mintz 2000.

Table 5: ***BVT Rates to Replace 2000 Provincial Revenues from Business Taxes: Provincial Allocation of Business Value Added using Provincial Shares of the Canadian Tax Base of the CIT***

	CIT	CIT+ Capital Taxes	CIT+Capital Taxes + 5% of Property Taxes	CIT+Capital Taxes + 5% of Property Taxes + Payroll Taxes
			(percent)	
British Columbia	2.8	3.5	3.9	3.9
Alberta	2.6	2.7	2.9	2.9
Saskatchewan	3.6	6.0	6.5	6.5
Manitoba	1.8	3.2	3.6	5.7
Ontario	3.1	3.8	4.2	5.7
Quebec	1.9	4.1	4.5	8.7
New Brunswick	1.9	2.8	3.1	3.1
Nova Scotia	1.7	2.5	2.9	2.9
Prince Edward Island	2.9	3.1	3.6	3.6
Newfoundland	3.9	4.6	4.8	6.7
Total	2.7	3.7	4.1	5.7

Source: Bird and Mintz 2000.

combination with capital taxes, plus 5 percent of property tax revenues,[21] and plus provincial payroll taxes (not including workers' compensation premiums).

The calculations for Table 4 apportion business value added according to provincial shares of national value added — an appropriate way to allocate the tax base for businesses operating in more than one jurisdiction. However, since provincial-level data do not separate public from private activities, too much value added is assigned to provinces with a larger public sector. The calculations in Table 5 allocate business value added on the basis of the current formula used to allocate corporate income (for most businesses, one-half of the share of payroll and sales measured on a destination basis). But sales on a destination basis do not necessarily reflect value added in production, so these weights discriminate against provinces (for example, resource provinces) that tend to export intermediate product to related establishments in other provinces that sell the product.

In both cases, if the BVT replaced only the provincial CIT, the average provincial BVT rate in 1999 would have been only 2.7 percent. Ontario would have an above-average rate and several eastern provinces and Quebec would have a lower rate, but in all cases the lower rate and broader base would be much less distortionary than the present CIT taxes. If the BVT replaced

21 A 5 percent reduction in property taxes could provide a $1.5 billion dollar reduction in nonresidential property taxes, or about 10 percent of total property taxes paid by businesses. Bird and Mintz (2000) include this in their calculations because they argue that a local BVT surcharge on a provincial BVT would be a useful way to reduce local reliance on nonresidential property taxes. While we think this argument has some merit, a local BVT would clearly raise even more technical questions than the provincial BVT discussed here, so we do not pursue this possibility further in this *Commentary*.

both business income taxes and capital taxes, the average provincial rate would increase to 3.7 percent, with above-average rates in Saskatchewan, Quebec and Ontario. If the BVT also replaces 5 percent of property taxes (a significant share of the nonresidential property tax), rates would increase on average to 4.1 percent, with similar variations across provinces. Finally, if provincial general payroll taxes were also replaced, the average BVT rate would rise to 5.7 percent. Given Quebec's higher payroll taxes, it would have the highest provincial rate on this base (8.0 percent in Table 4 and 8.7 percent in Table 5). The lowest rate would be in Nova Scotia and New Brunswick (1.9 percent in Table 4) or Nova Scotia and Alberta (2.9 percent in Table 5).[22]

A revenue-neutral BVT rate would need to be rather high, because provincial (and local) taxes on business are already high in Canada.

These calculations demonstrate that a revenue-neutral BVT rate covering all the taxes in Tables 4 and 5 would need to be rather high, because provincial (and local) taxes on business are already high in Canada. A less ambitious target — for example, replacing only CIT and capital taxes — would yield lower rates. Since rates would vary significantly across provinces, there would still be important issues with regard to tax avoidance, tax competition, and equalization of provincial tax revenues, which already exist under the current system. On the other hand, provincial CITs that are now as high as 17 percent would be eliminated.

The calculations in Tables 4 and 5 are only illustrative. More refined data might alter the weights, and extensive federal-provincial discussions undoubtedly would be needed to determine how to allocate the tax base of firms that operate in more than one jurisdiction. Some provinces might replace only business income and capital taxes, or replace more property taxes and only part of payroll taxes. To keep BVT rates from becoming too high, provinces might maintain some existing capital and payroll taxes. Our preferred solution would give the highest priority to eliminating CITs and capital taxes. Political priorities may of course differ.

Tables 6 and 7 extend and update the Bird and Mintz analysis by presenting combined federal-provincial METR calculations for the manufacturing and services sectors, respectively, under both the existing (2000) system and a revenue-neutral BVT that replaces *only* the provincial corporate income tax.[23] The BVT rates used in the calculations are from column 1 of Table 5. The tables show marginal effective tax rates on capital in the aggregate and by broad asset classes — buildings, machinery and equipment, inventories, and land. The most striking feature of the calculations is that moving to a BVT reduces METRs on capital in *both* manufacturing and services and in *every* province. On average, the aggregate METR falls by 7.5 percentage points in the services sector, and 6.3 percentage points in the manufacturing sector. Furthermore, inter-asset variations in METRs across different types of assets are lower under the BVT than under the existing provincial corporate tax. This means lower efficiency costs arising from inter-asset distortions.

Table 8 presents revenue-neutral METR calculations for 2006, taking into account the announced rate cuts in Ontario and Alberta. For the sake of brevity, we show calculations for the services sector only, disaggregated in total and for the

22 Note that we are not suggesting increases in business tax revenues in any province. The rates shown in these tables are simply those needed to yield the same revenue as now collected from the existing taxes on business in the different provinces.

23 In principle, it would be desirable to replace all taxes on business income, as was done in Italy (see the Appendix), but we lack sufficient data to simulate such a substitution here.

Table 6: ***Marginal Effective Tax Rates on Capital in the Manufacturing Sector, by Province, 2000 System vs Revenue-Neutral BVT Replacing Provincial CIT***

	Total		Buildings		Machinery		Inventories		Land	
	CIT	BVT	CIT	BVT	CIT	BVT	CIT	BVT	CIT	BVT
					(percent)					
British Columbia	27.9	21.7	28.3	21.9	17.6	15.9	35.7	26.6	26.8	20.8
Alberta	21.6	15.5	22.0	15.9	8.4	6.3	31.2	22.8	21.4	15.8
Saskatchewan	26.8	25.2	27.1	25.5	18.2	18.5	33.6	30.7	25.8	24.5
Manitoba	30.0	22.7	30.3	22.9	19.7	16.6	37.8	27.8	28.8	21.8
Ontario	25.6	22.0	25.9	22.2	16.9	16.1	32.6	26.9	24.5	21.1
Quebec	24.2	21.4	24.6	21.9	11.6	10.9	33.3	29.4	24.2	21.4
New Brunswick	26.0	18.0	26.4	18.5	11.8	8.2	36.1	25.6	25.7	18.3
Nova Scotia	24.9	17.3	25.3	17.7	11.0	7.6	34.8	24.8	24.6	17.6
Prince Edward Island	19.9	16.9	20.1	17.0	13.4	12.5	25.4	20.8	18.7	15.7
Newfoundland	15.5	16.9	15.9	17.3	5.3	7.3	23.4	24.3	15.7	17.2

Source: Authors' calculations.

Table 7: ***Marginal Effective Tax Rates on Capital in the Services Sector, by Province, 2000 System vs Revenue-Neutral BVT Replacing Provincial CIT***

	Total		Buildings		Machinery		Inventories		Land	
	CIT	BVT	CIT	BVT	CIT	BVT	CIT	BVT	CIT	BVT
					(percent)					
British Columbia	35.9	28.1	31.6	24.5	40.1	32.6	41.4	31.6	31.3	24.4
Alberta	30.6	22.2	26.4	19.0	31.7	22.9	38.2	28.3	26.9	19.8
Saskatchewan	38.3	31.4	34.0	27.8	42.3	35.6	43.9	35.3	35.8	27.8
Manitoba	37.7	28.8	33.3	25.2	41.7	33.3	43.2	32.5	33.1	25.2
Ontario	33.8	28.4	29.5	24.8	38.1	32.9	38.9	32.0	29.3	24.7
Quebec	31.1	27.6	27.2	24.2	32.0	28.3	38.2	33.9	27.9	25.1
New Brunswick	34.1	24.4	29.9	21.2	35.3	25.1	41.8	30.6	30.3	22.0
Nova Scotia	32.9	23.7	28.8	20.5	34.1	24.4	40.6	29.9	29.2	21.3
Prince Edward Island	33.4	25.4	29.0	21.9	37.7	30.2	38.7	28.7	28.7	21.7
Newfoundland	29.4	23.7	25.3	20.5	30.4	24.4	36.9	29.9	25.8	21.3

Source: Authors' calculations.

Table 8: ***Marginal Effective Tax Rates on Capital in the Services Sector, by Province, 2006 System vs Revenue-Neutral BVT Replacing Provincial CIT***

	Total		Buildings		Machinery		Inventories		Land	
	CIT	BVT	CIT	BVT	CIT	BVT	CIT	BVT	CIT	BVT
					(percent)					
British Columbia	31.1	24.1	27.0	20.9	35.5	28.9	35.7	26.6	26.9	20.8
Alberta	19.8	16.2	16.7	13.7	20.5	16.7	25.9	21.2	17.4	14.4
Saskatchewan	33.7	27.7	29.7	24.5	38.0	32.2	38.6	30.7	29.6	24.5
Manitoba	33.0	25.1	28.9	21.9	37.3	29.8	37.8	27.8	28.8	21.8
Ontario	25.8	22.9	22.2	19.8	30.6	27.8	29.2	25.2	22.0	19.6
Quebec	26.8	23.8	23.4	20.9	27.6	24.3	33.3	29.4	24.2	21.7
New Brunswick	28.9	20.2	25.0	17.5	29.9	20.8	36.1	25.6	25.7	18.3
Nova Scotia	27.8	19.5	24.0	16.8	28.7	20.0	34.9	24.8	24.6	17.6
Prince Edward Island	28.2	21.1	24.1	18.0	32.9	26.2	32.5	23.1	29.9	17.8
Newfoundland	24.0	19.1	20.4	16.4	24.9	19.6	30.8	24.4	21.1	17.2

Source: Authors' calculations.

Table 9: ***Marginal Effective Tax Rates on Capital, by Province,[a] Revenue-Neutral BVT Replacing Current (2000) Provincial CIT and Capital Taxes[b]***

	Manufacturing			Services		
	BVT: CIT + CAP	BVT: CIT	Current	BVT: CIT + CAP	BVT: CIT	Current
			(percent)			
British Columbia	19.4	21.7	27.9	26.1	28.1	35.9
Alberta	15.5	15.5	21.6	22.2	22.2	30.6
Saskatchewan	22.0	25.2	26.8	28.8	31.4	38.3
Manitoba	19.1	22.7	30.0	25.7	28.8	37.7
Ontario	19.7	22.0	25.6	26.4	28.4	33.8
Quebec	17.1	21.4	24.2	23.9	27.6	31.1
New Brunswick	15.7	18.0	26.0	22.4	24.4	34.1
Nova Scotia	15.4	17.3	24.9	22.0	23.7	32.9
Prince Edward Island	16.9	16.9	19.9	25.4	25.4	33.4
Newfoundland	16.9	16.9	15.5	23.7	23.7	29.4

[a] Combined federal/provincial METRs.

[b] Incorporates CIT rate cuts at the federal level and in Ontario and Alberta. All of the rate reductions will be fully implemented by 2006.

Source: Authors' calculations.

four broad asset classes. A substantial decline in the METRs results from the move to a revenue-neutral provincial BVT in 2006, both in aggregate and across all asset classes. A revenue-neutral BVT would clearly do more than cuts in CIT rates to bring aggregate combined federal-provincial METRs for the services sector to more competitive international levels. In Alberta, for example, the BVT would result in the lowest combined service sector aggregate METR in the G-7, just above Germany, which recently introduced a substantial CIT rate cut effective in 2001.

Table 9 presents aggregate METRs for the manufacturing and services sectors, assuming that the BVT replaces not only current (2000) provincial CITs but also capital taxes in the seven provinces that currently levy them. Eliminating that tax will, unsurprisingly, reduce aggregate METRs even further. In provinces with a substantial capital tax, such as Quebec and Saskatchewan, METRs would decline by an additional 3 to 4 percentage points. This would lead to a substantial reduction in METRs on capital for Canada as a whole.

The flip side of the BVT coin, however, is that, while it decreases the tax on corporate capital, it increases the tax on labor. Since labor is less mobile than capital, such a change in the tax mix may be economically sensible if one is concerned about competitive pressures, though perhaps not politically palatable. Even those concerned solely with efficiency might be concerned about the effects that an origin-based tax such as the BVT — to the extent it is not offset by producer benefits from public services — has on the cost of doing business and its implications for the competitiveness of exports. We can consider some of these questions by employing an extension of the METR approach.

Effective tax rates on the various inputs into the production process may be aggregated into a single measure called the METR on production costs, as McKenzie et al. (1997) show. This is the effective excise tax rate levied on the marginal cost of production through taxes on the various inputs into the production process. In other words, it is the percentage increase in marginal production costs arising from the taxation of labor and capital.

Table 10 presents calculations of the METR on production costs for Alberta, as an example. (Calculations for the other provinces yield similar results.) Even in the extreme case in which it is assumed that the *entire* burden of the higher tax on labor is borne by businesses, replacing the CIT with a revenue-neutral BVT has virtually no impact on marginal production costs. If we make the more reasonable assumption that a sizable portion of the burden of the tax on labor is borne by

Table 10: ***Marginal Effective Tax Rates on Production Costs, Alberta, Revenue-Neutral BVT Replacing Current (2000) Provincial CIT***

	CIT	BVT
	(percent)	
Business full burden labor taxes		
Manufacturing	12.7	12.4
Services	13.1	13.2
Business 1/3 burden labor taxes		
Manufacturing	8.3	6.8
Services	7.0	6.7

Source: Authors' calculations.

individuals through a fall in wages,[24] the METR on production costs would actually *decline* under the BVT. The lesson is clear. By switching the tax burden from capital to labor, Canada's tax system would become more competitive internationally, not just in its treatment of mobile capital, but also with respect to the impact of the tax system on the marginal cost of production.

As a replacement for provincial corporate income and capital taxes, an income-based BVT would thus improve the tax system in several ways. First, such a tax would be more neutral than the current CIT and capital taxes, which discriminate against capital investment. Second, a BVT would be less susceptible to base erosion. The tax rate would be lower and corporate profits (gross of interest expenses) would be fully taxed and hence unaffected by the degree of debt financing. Third, the BVT base, although less cyclically sensitive than corporate income taxes, would be more sensitive to business cycles than the increasingly important capital taxes, which are essentially fixed payments that hit businesses hardest in cyclical downturns, when they are most vulnerable. BVT-type proposals are sometimes criticized (see the discussion of the Michigan tax in the Appendix) because, unlike CITs, they must be paid whether corporations make profits or not. But this is, of course, one reason they are much more efficient. In addition, to the extent that the rationale for taxing business rests on benefit or entitlement grounds, a BVT is more equitable than the levies it replaces.

Implementing a BVT

Implementing such a novel proposal as a BVT at the provincial level would, of course, present many difficulties, which we discuss in the remainder of this section. Some are clearly important but none seems sufficient either to make the BVT impossible or to obviate its significant efficiency benefits.[25] The status quo is itself giving rise to increasing problems. It seems to us that moving to a BVT is more likely to lead to adequate solutions than tinkering further with the CIT.

Calculating the BVT

In practice, many detailed definitional issues would have to be resolved before a BVT could be implemented. Here we provide only a broad sketch of how some of the major questions might be answered in principle. The tax base, for example,

24 Dahlby (1993) suggests that as much as two-thirds of taxes on labor are borne by workers, with one-third borne by businesses.

25 Much of the discussion in this section follows closely that in Bird and Mintz (2000).

could be calculated simply by deducting taxable financial income and adding back interest expense to business income as now computed for the federal CIT. The BVT could be imposed on a net income basis and depreciation deductions could be simplified, as discussed below, with capital cost allowances (CCA) added back to business income before allowing the BVT depreciation deduction. Some costs incurred to earn financial income could also be disallowed. If so, additional rules would be needed to disallow or apportion costs between nonfinancial and financial activities (for example, fees paid to financial advisors). If the BVT rate were as low as the earlier calculations suggest, there would be less need for such adjustments and the rules for these purposes could likely be simplified. In addition, since the principle of the BVT is to tax income on an origin basis, income from foreign activities should presumably be ignored.

Several additional issues would need to be dealt with. Any BVT would likely have to exclude certain categories of income — nonprofits, charities, Crown corporations, municipal government business activities, and aboriginal bands — except where such income is already taxed under the corporate income tax. Some distortions would thus remain, as with business income taxes in general, but they would be smaller because tax rates would be lower than under the existing provincial CITs. The deduction for depreciation expenses could be simplified by using the current federal capital consumption allowance system, although this would introduce some distortions (see Technical Committee on Business Taxataion 1998). Alternatively, depreciation deductions could be determined separately for the BVT, perhaps up to and including expensing capital.[26] As also noted earlier, a special capital and/or payroll tax regime would be needed for financial institutions and insurance companies.[27]

Coordination between Provinces

Even if every province agreed to move to a BVT approach, some coordination would clearly be needed.

Even if every province agreed to move to a BVT approach, which seems unlikely at least initially, some coordination would clearly be needed. The federal government would likely play some role, as with the present provincial CITs, in assisting provinces to allocate BVT revenues. It might agree to collect the taxes on behalf of some provinces, as under the current Tax Collection Agreements.

Two different coordination issues thus need to be resolved. The first issue is that the tax base should be as similar as possible in all the provinces — as in the case of the corporate income tax —to facilitate compliance and administration. This would mean similar rules to measure the base, including rates of depreciation. Provinces could use tax credits, as they do now, to differentiate their tax base if they wish, although the use of such credits on a selective basis is generally undesirable, like most selective policies.[28]

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26 Of course, as noted earlier, expensing turns the BVT into a consumption tax rather than an income tax.

27 Such regimes already exist in most provinces, although they are clearly deficient in many respects and would need careful re-examination.

28 For an extended discussion of provincial incentive policies, see Bird (1986).

The second coordination issue is the allocation formula for business value added. Businesses that operate in only one province would be taxed solely by that province. Formula weights would be needed to allocate value added for businesses operating in more than one province. The weights could be based on payroll, sales (on an *origin* basis) or capital (as determined by the undepreciated amount of capital), or some combination.[29] Provincial coordination on this matter would be difficult because weights have an important impact on BVT revenues received, as illustrated by Tables 4 and 5. A logical starting point for discussion might be the current method used to allocate corporate income, although with sales by origin, rather than by destination. As Smith (1998) documents, negotiations about tax base are by no means easy but have often reached successful conclusions in the past. There seems no reason that they could not do so again in this case, although the road to agreement might take a long time.

Relationship to the Personal Income Tax

Under the current tax system, corporate and personal income taxes are roughly integrated (for distributed profits) at a combined federal-provincial corporate income tax rate of 20 percent. This is more or less the current "small business" rate in most provinces, through the combination of the dividend tax credit and partial exclusion of capital gains from taxable income. If the provinces eliminated their business income taxes and assessed an equal-yield BVT (at an average rate of 2.7 percent), these integration measures might need to be re-examined.[30]

The simplest approach is to do nothing. The BVT may replace several taxes but the only one that matters for integration purposes is the CIT. To the extent that the BVT is in part a payment for benefits received, as suggested earlier, no integration seems necessary or desirable.[31] It is possible that the BVT, together with the federal corporate income tax, will create some opportunities for tax planning, but such problems are unlikely to be serious. A federal corporate income tax rate in 2000 of 29.12 percent (the top rate in 2000, including surtax), with a BVT rate of 3.7 percent (replacing provincial CIT and capital taxes), would yield a combined rate of about 33 percent, instead of 43 percent. A shift to the BVT would thus appear to improve the integration of corporate and personal income taxes for larger corporations. Small businesses would still be taxed at the federal corporate rate of 13.12 percent and, the 3.7 percent BVT would bring the total rate on profits to about 17 percent. If the BVT rate were much lower, some adjustments to either the corporate income tax or integration at the federal level may be needed — for example, reductions in the dividend tax credit and the portion of capital gains income excluded from tax.

A shift to the BVT would appear to improve the integration of corporate and personal income taxes for larger corporations.

29 Gordon (1986) briefly discusses this apportionment problem with state origin-based VATs.

30 Of course, the recent reduction of the federal capital gains inclusion rate to 50 percent will in all likelihood soon require some adjustment of the dividend credit rate in any case.

31 It might be argued that integration measures for domestic owners of businesses are not needed because they are ineffective in a small, open economy. This conclusion seems too strong, however. Some integration may be needed to minimize economic distortions resulting from tax planning. Moreover, since the evidence is that Canada is not a small, open economy in equity markets, dividend and capital gains taxes impact on equity prices of companies and the cost of equity finance (Technical Committee on Business Taxation1998), and some mitigation might therefore be warranted.

Integration is a more complicated issue with respect to salaries and interest expenses. Under the federal corporate income tax, such expenses are deductible from business income but fully taxed as income at the personal level. With the BVT, salaries and interest expense would not be deductible but would still be fully taxed under the personal income tax. The combined personal income tax rate and provincial BVT rate — for example, about 43 percent for the highest bracket in Alberta — would be slightly greater on such income than the combined federal and provincial taxes on dividends and capital gains earned from investments in smaller firms. There would thus be a small incentive for small businesses to structure payments in the form of dividends and surplus stripping. This incentive would be reduced if the BVT were assessed at a low rate or if the dividend tax credit was reduced somewhat, as seems needed in any case to match the recent increase in the capital gains exclusion.

Deductibility of the BVT from Federal Corporate Income Tax

At present, provincial capital, property, and payroll taxes are deductible from the federal corporate income tax, but provincial corporate income taxes are not. The deductibility of a BVT that replaced some of these taxes from federal corporate income tax is thus an important issue. If the BVT is not deductible, federal CIT revenues would, of course, increase, which hardly encourages the provinces to introduce BVTs, and if the BVT is deductible federal tax revenues would decline. One way to resolve this issue might be to allow a partial deduction of the BVT equivalent to the amount of provincial taxes that are currently not deductible.[32] While this would prevent a windfall gain or loss in federal tax revenues, the impact on the provinces would vary given their different business tax mixes.

Crediting against Foreign Taxes

At present, provincial CITs paid by multinational companies operating in Canada may be credited against taxes of certain capital exporting countries — the United States, United Kingdom, and Japan, for example. A shift from provincial corporate income taxes to the BVT could cause some multinationals to lose foreign tax credits, increasing the tax cost of investments in Canada.

This would be partly offset because the BVT would be deductible in calculating foreign source income earned by the parent in countries that tax such income. Treatment of the BVT for international tax purposes is clearly an important issue. The main difficulty here involves the eligibility of the BVT for foreign tax credits in the United States. The case of Italy (described in the Appendix) provides some guidance in this regard. Italy imposes a regional tax very similar to the BVT. After some discussion, the US government agreed to allow a portion of that tax to be creditable for US tax purposes. The creditable portion is calculated roughly as the

Treatment of the BVT for international tax purposes is clearly an important issue.

32 This is similar to the crediting arrangement recently accepted by the US Internal Revenue Service with respect to the Italian IRAP, as mentioned below.

tax rate (4.25 percent) times net income (Smith and Gann 1998) — in effect, the part of the tax that falls on profits. A similar arrangement should be possible for Canada, although no doubt there would be lengthy and complex discussions en route.

Equalization of Provincial Tax Revenues

If the provinces replaced existing business taxes with the BVT, presumably the calculation of federal equalization payments to the have-not provinces would include the BVT. Although the proposed tax substitution could, if desired, be revenue neutral in aggregate, it is by no means clear that the distribution of value added to determine the national standard rate and provincial tax base would be the same as the distribution of the tax base for other taxes. Since interest expense is in effect disallowed under a BVT, firms with small profits but large interest expenses would clearly pay more than under a CIT. Moreover, BVT rates might differ significantly across provinces depending on the weights used to allocate value added, and this would certainly affect equalization payments. Indeed, any significant change to provincial tax systems might result in some adjustments to the equalization system. Again, this factor would have to be taken carefully into account before adopting the BVT in any province, and the incentives to do so would depend on the province's position with respect to the equalization formula.

Three groups of provinces may be distinguished. Ontario, Alberta, and British Columbia would not be affected, as they do not receive equalization payments. Manitoba, Saskatchewan, and Quebec, which receive grants and are included in the "standard" used to calculate equalization, would gain additional benefits if their actions led to an increase in the equalization transfer. The four Atlantic provinces would, of course, also gain but could not influence the outcome by their own actions, since they are excluded from the standard.

Conclusion

A popular adage states that "the only good taxes are old taxes." The reason may be that change always involves adjustment costs in the form of increased uncertainty, the need to learn a new system, and so forth. These costs may be large in a complex modern economy. Unless the expected gains, both political and economic, clearly outweigh the costs, it is presumably better to stay with the old system. This is especially true with respect to taxes that impinge on the main economic actor of our society, the corporation.[33]

Provinces do, and perhaps always will, tax business capital.

Provinces do, and perhaps always will, tax business capital. Doing so through a BVT rather than a CIT results in a significant reduction in the effective tax rate on capital, which lowers the distortions caused by the taxation of corporate income. It brings the tax rate on capital and labor into closer alignment, which lowers distortions in the factor mix. It reduces the tax discrimination against equity as opposed to debt financing. It reduces the variance in effective tax rates across

33 In the words of Vickrey (1991, 132), a strong advocate of abolishing the corporate tax, "[i]t is an additional item on the bill of indictment against the tax that getting rid of it is so difficult."

different types of capital. And it does all of these things in a revenue-neutral fashion. These are substantial benefits.

On the cost side, many technical issues need to be worked out. But the most significant argument against moving to a BVT at the provincial level is neither economic nor technical but political. Canadians are often reluctant to be the first to do anything different, and the BVT does indeed seem different.[34] As we show in the Appendix, however, this proposal is not as novel as it may seem. Similar taxes have long been discussed, and occasionally implemented, in other jurisdictions.

The BVT would substantially improve the taxation of business in Canada.

Moving provincial business taxes in the direction of the BVT would substantially improve the taxation of business in Canada. It would provide revenues to provincial governments in an economically neutral fashion. Even at revenue-neutral rates, it would substantially reduce the effective rate of taxation on new capital. It is thus eminently attractive from an economic perspective.

The question that remains is whether such a reform is likely to be achievable. We conclude by suggesting, in true Canadian fashion, two possible ways in which provinces could proceed incrementally in this direction, even if they do not wish to explicitly replace their CITs (and capital taxes) by a BVT. Either or both of these paths could be followed, with matching reductions in the "bad" taxes that now exist.

The first path is simply a logical continuation and completion of the recent tendency of some provinces to rely more heavily on taxation of payrolls and capital rather than on profits taxation alone. Simplifying a bit, a tax levied at a uniform rate on payrolls and profits is equivalent to a tax on value added on an origin basis. Provinces could simply expand existing capital and payroll taxes in the direction of a BVT, while lowering the CIT rate. This approach would make most sense if those taxes were imposed in a more uniform and harmonized fashion. For example, the base of the capital tax could be expanded to encompass all nonlabor incomes generated (the sum of profits, interest paid, and rents paid). Alternatively, and preferably in the long run, provinces might go at once to taxing value-added less wage costs but not deducting capital expenditures. If payroll costs were then taxed at the same rate, the BVT would arrive by the back door, as it were.

The second path leading in the same direction applies only to those provinces that have not yet moved to a VAT-type sales tax and still impose significant taxes on business inputs through their "retail" sales taxes. These taxes can cause significant distortions. An important barrier to adopting a VAT in these provinces appears to be fear of public reaction to the sudden appearance of a host of "new" sales taxes on services — what might perhaps be called the "Mulroney effect." This problem is obviously much less acute at the provincial level, where the PST is already visible, than it was at the federal level, but it is an important consideration. Quebec, for example, initially taxed services at only half the rate applied to goods when it introduced the Quebec sales tax, and the fear of revenue losses still constrains the province from giving full input credits to large firms. Both of these transitional problems of moving to a provincial VAT would be substantially lessened if the revenue thus forgone were replaced by a uniform factor tax of the BVT-type. Not only would there be no revenue loss, but the rate of the new provincial VAT could, at least initially, be much lower than would otherwise be the case.

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34 See, for example, the discussion of the BVT approach in Alberta (2000).

One way or another, the BVT could thus gradually become a factor to be taken into account in thinking about provincial taxation. It is relevant to the reform of provincial sales taxes. It offers a rationalization and logic now missing from the proliferation of non-profit-based taxes on capital and payrolls to which provinces are increasingly having recourse. Moreover, as Bird and Mintz (2000) note, it is also relevant to the reform of property taxation and provincial-municipal fiscal relations in general. Most important, it provides a much more economically desirable way of taxing business than the provincial corporate income tax, and improves Canada's fiscal competitiveness. These are no small virtues.

Appendix: Experience with Business Value Taxes

Germany

The grandfather of all value-added local business taxes is probably the German *gewerbesteuer*, introduced in 1936.[35] As originally conceived, this tax was levied on the income of all factors of production, although not in a very coherent fashion. Over the years, the scope of the tax base has been substantially eroded. The payroll component was abolished in 1980. Since 1984, businesses have been able to deduct 50 percent of interest on "long-term" debts. The initial, relatively logical, coherence of the tax has thus been diminished, and the tax has been largely removed from all but larger enterprises.

Although local authorities still have considerable discretion with respect to tax rates, the base changes decreed from above have substantially reduced their revenue autonomy. Therefore, most of them supported a federal proposal in 1982 to introduce an explicit local value-added tax, at an estimated rate of about 3 percent, on top of the federal VAT. The tax was almost exactly equivalent to the BVT. It was to be levied on a net income origin basis and preferably to be collected by the addition method (that is, on the sum of payroll, interest, rents, and net profits). In the end this proposal was rejected, owing largely to business opposition to paying taxes when firms had no profits.

The United States

Michigan first introduced a modified income-type of VAT, called the Business Activities Tax, in 1953.[36] It was abolished in 1967, but a similar tax, the Single Business Tax (SBT), was introduced in 1976 to replace the state CIT and some other taxes on business (Brazer 1977). It, too, was a modified VAT, computed through the addition method and measured on the income side as the sum of payments to labor and capital, with a number of important deductions and limits that moved it closer to a consumption base (ACIR 1978).

The main virtues of this tax were increased revenue stability and the extension of taxation to noncorporate forms of business. Many saw these virtues as vices — some said that SBT stood for "Small Business Tax." As in Germany, business (perhaps reflecting deeply imbedded views about the "correctness" of taxing income) bitterly resented paying SBT when there would be no CIT liability. These pressures, plus the usual tendency of tax bases to erode over time, and the changes introduced to provide investment incentives, gradually made the SBT excessively complex and unpopular (Kenyon 1996).

Consequently, in 1999 Michigan again drew back from its pioneering attempt to impose a state VAT. Although the SBT still exists at a fairly significant rate of 2.3 percent, it is now supposed to be phased out on a prolonged 23-year schedule.

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35 This brief account is based largely on Bennett and Krebs (1987).

36 For a discussion of this tax, see Ebel (1972).

Judging by past events, however, it would not be surprising to see yet another reversal within that time.

The second US attempt at a state VAT is much more recent. In 1993, New Hampshire introduced a Business Enterprise Tax (BET), which differed from Michigan's SBT in a number of important respects. The base of the BET is essentially net income (Kenyon 1996), and the tax is levied at a much lower rate — 0.25 percent compared to the current rate of 2.3 percent in Michigan. The reason is that the BET did not replace the CIT in New Hampshire but is instead a complement for it. Like the Michigan tax, the BET is levied on value added by the addition method, and is intended to provide a more stable, efficient, and simple source of state revenues. Kenyon (1996) argues that the BET has indeed increased stability, that it is less distorting than an equivalent increased CIT would have been, and that it is a relatively simple tax.

The main technical problem with income-type origin-based state VATs in the United States concerns their application to multistate (or multinational) businesses. Michigan uses the same apportionment rule as many states do for the income tax — an equally-weighted three-factor allocation formula (payroll, profits, and sales in the state), ignoring the illogic of using destination-based sales in this tax base. Although New Hampshire, unlike Michigan, actually has a CIT, it does not use the same apportionment rule but instead applies different factors to each element of the tax base, substantially complicating what is otherwise a very simple tax. Such problems would be greatly simplified if a simple uniform apportionment formula were applied, as is now done in Canada with respect to provincial CITS. The present two-factor formula — equally-weighted payroll and sales at destination — would not seem appropriate, however, in part because the BVT is in concept an origin-based tax.

Italy

Italy provides a particularly interesting and relevant example. In 1998, a new business tax, the IRAP, was introduced, replacing four existing taxes — a regional income tax levied on business income (at a rate of about 16 percent), a tax on dividend distributions by corporations, a small net worth tax, and payroll contributions levied to finance a national health scheme (Maisto 1997; Dell'Anse 1997).[37] The IRAP is essentially an income-based VAT levied by the subtraction method (the difference between gross receipts and purchases from other firms, including depreciation) on an origin basis. Most firms, including all types of business and self-employed activities, are subject to IRAP at a rate of 4.25 percent, although regional governments can levy an additional percentage point if they choose.

The IRAP is the closest approximation to the BVT that now exists. The tax base is calculated annually by a direct subtraction method as the difference between sales revenues and the cost of intermediate goods and services, with specific rules for different types of financial institutions (Bordignon et al. 2001). Wages and

37 This was part of a broader reform of business taxation, including taxation at the national level, as discussed in Bordignon et al. (2001).

salaries and interest payments are not deductible, and outlays for capital goods are deducted in accordance with tax depreciation schedules. A recent assessment of this tax stressed its neutrality with respect to both choice of organizational form and between equity and debt financing, regardless of the source of finance, but noted that on balance the tax favors capital over labor because tax depreciation exceeds economic depreciation (Bordignon et al. 2001). The major virtue noted was that it permitted a significant reduction of taxes on profits, and hence brought Italian profits taxes closer to those in other European Union countries. This is along the lines we suggest in the text. The IRAP is particularly interesting because, after considerable discussion, the US Internal Revenue Service agreed that a "portion" of the IRAP would be creditable for US income tax purposes (Smith and Gann 1998). This provides a potentially important precedent for Canadian provinces that may wish to experiment with the BVT.

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